

DISCLAIMER: Data displayed below is for informational purposes only.**Updates Completed By Engineer****EXISTING DEFICIENCIES:**

Water: Adak does not meet the Surface Water Treatment Rule and is under a compliance agreement with DEC to build a water treatment plant by 2016.

Sewer: None

Solid Waste: None

O & M: None

PROPOSED FACILITIES:

Water: Design and construct a water treatment plant.

Sewer: None

Solid Waste: None

O & M: None

CIP Details:

Related Projects: None.

Ongoing Funding: RD funding to downsize the water system and install meters became available in May 2014. This construction will take place in 2014 or 2015. Once meters are in place, it will be possible to measure water use in the community

COST ESTIMATE

Scope Item	Funding Source	Quantity	Units	Health Impact Tier
WATER TREATMENT - Foundation - conventional, local gravel, water treatment	IHS Regular	900	Sf.	B
WATER TREATMENT - Treatment plant, new, no foundation, water treatment	IHS Regular	900	Sf.	B
O & M, Other - Professional Services (engineering)	IHS Regular	1	Ls.	B

Health Impact Tier: A - First Service
 B - Regulatory Compliance
 C - Essential Upgrades
 D - Beneficial Upgrades
 E - Desired Upgrades

Total Costs: \$5,000,000.00

DISCLAIMER: Data displayed below is for informational purposes only.**Updates Completed By Engineer****EXISTING DEFICIENCIES:**

Water: Adak is under a compliance order from DEC to construct a water plant by 2016. Once a WTP is constructed, a water tank will be needed to hold treated water. Additional pipelines will be required to tie the water tank into the existing piped water system.

Sewer: None

Solid Waste: None

O & M: None

PROPOSED FACILITIES:

Water: Design and construct a 175,000 gallon treated water tank. Connect the tank to the existing piped potable water system.

Sewer: None

Solid Waste: None

O & M: None

CIP Details:

Related Projects: None.

Ongoing Funding: Funding to downsize the water system was made available in May 2014. This construction will take place in 2014 or 2015.

COST ESTIMATE

Scope Item	Funding Source	Quantity	Units	Health Impact Tier
WATER DISTRIBUTION - Water storage tank, no foundation, water distribution	IHS Regular	175000	Gal.	D
Water, Other - Foundation - conventional, local gravel, water other	IHS Regular	1500	Sf.	D
WATER DISTRIBUTION - Mains, direct bury, water distribution	IHS Regular	1000	Ft.	D

Health Impact Tier: A - First Service
 B - Regulatory Compliance
 C - Essential Upgrades
 D - Beneficial Upgrades
 E - Desired Upgrades

Total Costs: \$1,110,000.00

DISCLAIMER: Data displayed below is for informational purposes only.**Updates Completed By Engineer****EXISTING DEFICIENCIES:**

Water: The current water system lacks meters. The intake screen at the water source has failed, making it possible for fish, debris, and vegetation to flow down the transmission line. Pressure relief station PRV1 needs upgrades. Pressure relief station PRV2 doesn't function. The raw water tanks need isolation valves, meters, and tank level gauges.

Sewer: None

Solid Waste: None

O & M: None

PROPOSED FACILITIES:

Water: Add meters, replace the intake screen at the water source, upgrade PRV1 and PRV2, and add isolation valves, a meter and level gauges to the raw water tank.

Sewer: None

Solid Waste: None

O & M: None

CIP Details:

Related Projects: None.

Ongoing Funding: Money to downsize the water system was made available in May 2014. This construction will take place in 2014 or 2015.

COST ESTIMATE

Scope Item	Funding Source	Quantity	Units	Health Impact Tier
WATER SOURCE - Surface water gallery, water source	IHS Regular	1	Ea.	C
Water, Other - Other water	IHS Regular	1	Ls.	C
WATER DISTRIBUTION - Water storage tank, no foundation, water distribution	IHS Regular	990000	Gal.	C
Water, Other - Other water	VSW/RD	1	Ls.	C

Health Impact Tier:

- A - First Service
- B - Regulatory Compliance
- C - Essential Upgrades
- D - Beneficial Upgrades
- E - Desired Upgrades

Total Costs: \$2,338,500.00

DISCLAIMER: Data displayed below is for informational purposes only.**Updates Completed By Engineer****EXISTING DEFICIENCIES:****Water:** None**Sewer:** Adak currently has no sewage treatment. Raw sewage flows through an outfall line into Kuluk Bay.**Solid Waste:** None**O & M:** None**PROPOSED FACILITIES:****Water:** None**Sewer:** Design and construct a sewage lagoon ahead of the ocean outfall to provide sewage treatment.**Solid Waste:** None**O & M:** None**CIP Details:****Related Projects:** None.**Ongoing Funding:** Money to downsize the water system became available in May 2014. This construction will take place in 2014 or 2015.**COST ESTIMATE**

Scope Item	Funding Source	Quantity	Units	Health Impact Tier
SEWER TREATMENT - Lagoon, borrow local material, sewer treatment	IHS Regular	10	Ac.	C
Health Impact Tier: <ul style="list-style-type: none"> A - First Service B - Regulatory Compliance C - Essential Upgrades D - Beneficial Upgrades E - Desired Upgrades 				

Total Costs: \$4,250,000.00

DISCLAIMER: Data displayed below is for informational purposes only.**Updates Completed By Engineer****EXISTING DEFICIENCIES:****Water:** None**Sewer:** Adak has 13 lift stations. When the water/sewer system is downsized (a project planned for 2014/2015, depending on funding), only 2 will be necessary. At that time, 11 lift stations will need to be abandoned in a manner that meets DEC regulations; the remaining 2 will need to be upgraded to meet code.**Solid Waste:** None**O & M:** None**PROPOSED FACILITIES:****Water:** None**Sewer:** Abandon 11 lift stations, as required by DEC. Upgrade 2 lift stations to meet code.**Solid Waste:** None**O & M:** None**CIP Details:****Related Projects:** None.**Ongoing Funding:** Funding to downsize the water system was made available in May 2014. This construction will take place in 2014 or 2015.**COST ESTIMATE**

Scope Item	Funding Source	Quantity	Units	Health Impact Tier
SEWER COLLECTION - Lift station, sewer collection	IHS Regular	13	Ea.	C

Health Impact Tier:

- A - First Service
- B - Regulatory Compliance
- C - Essential Upgrades
- D - Beneficial Upgrades
- E - Desired Upgrades

Total Costs: \$955,500.00

O & M Worksheet

DISCLAIMER: Data displayed below is for informational purposes only.**Updates Completed By Engineer****EXISTING DEFICIENCIES:****Water:** Asbestos cement water main is beyond its design life.**Sewer:** Asbestos cement sewer main is beyond its design life.**Solid Waste:** None**O & M:** None**PROPOSED FACILITIES:****Water:** Replace AC water main with ductile iron.**Sewer:** Replace AC sewer main with ductile iron.**Solid Waste:** None**O & M:** None**CIP Details:****Related Projects:** None.**Ongoing Funding:** Funding to design the water system was made available in May 2014. This construction will take place in 2014 or 2015.**COST ESTIMATE**

Scope Item	Funding Source	Quantity	Units	Health Impact Tier
SEWER COLLECTION - Mains, direct bury, sewer collection	IHS Regular	10750	Ft.	C
WATER DISTRIBUTION - Mains, direct bury, water distribution	IHS Regular	6000	Ft.	C

Health Impact Tier:

- A - First Service
- B - Regulatory Compliance
- C - Essential Upgrades
- D - Beneficial Upgrades
- E - Desired Upgrades

Total Costs: \$5,443,750.00

DISCLAIMER: Data displayed below is for informational purposes only.**EXISTING DEFICIENCIES:**

Water: The current water storage facilities consist of two 10,000 gallon steel tanks that "float" on the system. The existing WST(s) also fail to provide the minimum 20 psi of pressure for the highest home in the village. The community is on a regulatory boil water notice due to component deficiencies. Akhiok is currently on the SNC list due to existing hardware deficiencies. These deficiencies will be addressed during the 2014 summer construction season.

Sewer: None

Solid Waste: None

O & M: None

PROPOSED FACILITIES:

Water: This project will provide a 150,000 gallon water storage tank as recommended in the master plan to meet storage needs and provide adequate static pressure for the community.

Sewer: None

Solid Waste: None

O & M: None

COST ESTIMATE

Scope Item	Funding Source	Quantity	Units	Health Impact Tier
WATER DISTRIBUTION - Water storage tank, no foundation, water distribution	IHS Regular	150000	Gal.	B
WATER DISTRIBUTION - Foundation - concrete foundation	IHS Regular	850	Sf.	B

Health Impact Tier: A - First Service
B - Regulatory Compliance
C - Essential Upgrades
D - Beneficial Upgrades
E - Desired Upgrades

Total Costs: \$622,500.00

DISCLAIMER: Data displayed below is for informational purposes only.

EXISTING DEFICIENCIES:

- Water:** The community does not receive adequate water each year. Periodic low snowfall and spring rainfall have left the community without drinking water.
- Sewer:** None
- Solid Waste:** None
- O & M:** None

PROPOSED FACILITIES:

- Water:** This project would propose to raise the elevation of the existing earth-filled water reservoir to double storage capacity.
- Sewer:** None
- Solid Waste:** None
- O & M:** None

COST ESTIMATE

Scope Item	Funding Source	Quantity	Units	Health Impact Tier
WATER SOURCE - Surface water impoundment, water source	IHS Regular	1	Ea.	C

Health Impact Tier:

A - First Service
B - Regulatory Compliance
C - Essential Upgrades
D - Beneficial Upgrades
E - Desired Upgrades

Total Costs: \$550,000.00

DISCLAIMER: Data displayed below is for informational purposes only.**EXISTING DEFICIENCIES:**

Water: The existing distribution system is 3 and 4 inch diameter cast iron and PVC pipe at shallow bury. Water services are 3/4 inch copper, with curb stop for shut-offs. The existing distribution has several leaks and is not sized adequately for fire suppression.

Sewer: None

Solid Waste: None

O & M: None

PROPOSED FACILITIES:

Water: This project would replace the existing water distribution with 8 inch HDPE SDR 11 pipe.

Sewer: None

Solid Waste: None

O & M: None

COST ESTIMATE

Scope Item	Funding Source	Quantity	Units	Health Impact Tier
WATER DISTRIBUTION - Mains, direct bury, water distribution	IHS Regular	2500	Ft.	D
WATER DISTRIBUTION - Service lines, direct bury, water distribution	IHS Regular	2300	Ft.	D

Health Impact Tier: A - First Service
 B - Regulatory Compliance
 C - Essential Upgrades
 D - Beneficial Upgrades
 E - Desired Upgrades

Total Costs: \$1,210,000.00

DISCLAIMER: Data displayed below is for informational purposes only.**EXISTING DEFICIENCIES:****Water:** None**Sewer:** ADEC requires sewage sludge to be disposed of in a trench separated from solid waste at an approved solid waste site. The existing solid waste site is not permitted nor does it have room for constructing a permitted sewage sludge lagoon.**Solid Waste:** None**O & M:** None**PROPOSED FACILITIES:****Water:** None**Sewer:** This project will construct a permitted sludge disposal area located at the proposed landfill site.**Solid Waste:** None**O & M:** None**COST ESTIMATE**

Scope Item	Funding Source	Quantity	Units	Health Impact Tier
SEWER TREATMENT - Lagoon, borrow local material, sewer treatment	IHS Regular	2	Ac.	C
SEWER TREATMENT - Septic tank pumper, sewer treatment	Other	1	Ea.	C

Health Impact Tier:

- A - First Service
- B - Regulatory Compliance
- C - Essential Upgrades
- D - Beneficial Upgrades
- E - Desired Upgrades

Total Costs: \$1,132,000.00

DISCLAIMER: Data displayed below is for informational purposes only.**EXISTING DEFICIENCIES:****Water:** None**Sewer:** The existing collection system consists of 6 inch ductile iron gravity mains and corrugated metal pipe (CMP) manholes with steel plate lids. Current design code requires a minimum of 8 inch diameter gravity sewers, unless waived by ADEC.**Solid Waste:** None**O & M:** None**PROPOSED FACILITIES:****Water:** None**Sewer:** This project will replaced the undersized gravity sewer mains in the community and replace the corrugated metal pipe manholes with concrete manholes.**Solid Waste:** None**O & M:** None**COST ESTIMATE**

Scope Item	Funding Source	Quantity	Units	Health Impact Tier
SEWER COLLECTION - Mains, direct bury, sewer collection	IHS Regular	2500	Ft.	D
SEWER COLLECTION - Service lines, direct bury, sewer collection	IHS Regular	2500	Ft.	D
Sewer, Other - Other sewer	IHS Regular	1	Ls.	D

Health Impact Tier: A - First Service
 B - Regulatory Compliance
 C - Essential Upgrades
 D - Beneficial Upgrades
 E - Desired Upgrades

Total Costs: \$868,725.00

DISCLAIMER: Data displayed below is for informational purposes only.**EXISTING DEFICIENCIES:****Water:** None**Sewer:** None**Solid Waste:** Unpermitted dump site needs to be relocated to a new site.**O & M:** Solid waste operations training needed.**PROPOSED FACILITIES:****Water:** None**Sewer:** None**Solid Waste:** Develop site selection report, select site, SW Management Plan, construct a new approved landfill and close old landfill site.**O & M:** None**COST ESTIMATE**

Scope Item	Funding Source	Quantity	Units	Health Impact Tier
Solid Waste C (Development) - Development, solid waste site	IHS Regular	1	Ac.	D

Health Impact Tier:

- A - First Service
- B - Regulatory Compliance
- C - Essential Upgrades
- D - Beneficial Upgrades
- E - Desired Upgrades

Total Costs: \$600,000.00

DISCLAIMER: Data displayed below is for informational purposes only.**Updates Completed By Engineer****EXISTING DEFICIENCIES:**

- Water:** No water service to existing 100 Native Homes in the east area of the community exists. 20 of the homes have no indoor plumbing and 80 were built with plumbing installed. Experience in other communities indicates that homes that were plumbed during construction and not connected to service; will need extensive rework to place the system in service. House plumbing and service lines are required for all 100 homes.
- Sewer:** No wastewater service to existing 100 homes located in the east area of the community exists. 20 of the homes have no indoor plumbing and 63 were built with plumbing installed. Experience in other communities indicates that homes that were plumbed during construction and not connected to service; will need extensive rework to place the system in service. House plumbing and service lines are required.
- Solid Waste:** None
- O & M:** None

PROPOSED FACILITIES:

- Water:** Installation of 4,400 linear feet of 6-inch buried arctic watermain, house plumbing improvements and circulating water services to existing native owned homes.
NOTE: -15 pts applied for exceeding \$4M cap. Project is on multi year list for the State of AK.
- Sewer:** Installation of 3,500 linear feet of 8-inch buried arctic sewermain, house plumbing improvements and arctic sewer service lines to existing native owned homes.
- Solid Waste:** None
- O & M:** None

CIP Details:**Related Projects:****Ongoing Funding:****COST ESTIMATE**

Scope Item	Funding Source	Quantity Units		Health Impact
				Tier
WATER DISTRIBUTION - Mains, direct bury, water distribution	IHS Regular	4400	Ft.	A
SEWER COLLECTION - Mains, direct bury, sewer collection	IHS Regular	3500	Ft.	A
SEWER COLLECTION - In-house plumbing, gravity, sewer collection	IHS Regular	100	Ea.	A

SEWER COLLECTION - Service lines, direct bury, sewer collection	IHS Regular	5000	Ft.	A
WATER DISTRIBUTION - In-house plumbing, water distribution	IHS Regular	100	Ea.	A
WATER DISTRIBUTION - Service lines, direct bury, water distribution	IHS Regular	500	Ft.	A
SEWER COLLECTION - Lift station, sewer collection	IHS Regular	1	Ea.	A

Health Impact Tier: A - First Service
 B - Regulatory Compliance
 C - Essential Upgrades
 D - Beneficial Upgrades
 E - Desired Upgrades

Total Costs: \$9,555,000.00

DISCLAIMER: Data displayed below is for informational purposes only.**EXISTING DEFICIENCIES:****Water:** None**Sewer:** None**Solid Waste:** Unpermitted open dumpsite, needs improvement.**O & M:** None**PROPOSED FACILITIES:****Water:** None**Sewer:** None**Solid Waste:** Develop site selection report, select site, SW Management Plan, construct site, close old site.**O & M:** None**COST ESTIMATE**

Scope Item	Funding Source	Quantity Units		Health Impact
				Tier
Solid Waste B (Closure) - Closure, solid waste site	IHS Regular	4	Ac.	D
Solid Waste C (Development) - Development, solid waste site	IHS Regular	3	Ac.	D
Solid Waste A (Plan) - Management Plan, Solid Waste	IHS Regular	1	Ls.	D

Health Impact Tier: A - First Service
B - Regulatory Compliance
C - Essential Upgrades
D - Beneficial Upgrades
E - Desired Upgrades

Total Costs: \$510,000.00

DISCLAIMER: Data displayed below is for informational purposes only.
Updates Completed By Engineer

EXISTING DEFICIENCIES:

Water: None

Sewer: School lacks sewer service line. School utilizes a temporary septic system which was not designed for long-term use.

Solid Waste: None

O & M: None

PROPOSED FACILITIES:

Water: None

Sewer: School sewer service line.

Solid Waste: None

O & M: None

CIP Details:

Related Projects:

Ongoing Funding:

COST ESTIMATE

Scope Item	Funding Source	Quantity	Units	Health Impact Tier
SEWER COLLECTION - Service lines, direct bury, sewer collection	IHS Regular	1	Ft.	A

Health Impact Tier: A - First Service
 B - Regulatory Compliance
 C - Essential Upgrades
 D - Beneficial Upgrades
 E - Desired Upgrades

Total Costs: \$200,000.00

DISCLAIMER: Data displayed below is for informational purposes only.
DRAFT

EXISTING DEFICIENCIES:

Water: None

Sewer: None

Solid Waste: Akiak has an unpermitted open dump.

O & M: None

PROPOSED FACILITIES:

Water: None

Sewer: None

Solid Waste: Close existing dump and construct permitted solid waste site.

O & M: None

CIP Details:

Related Projects: AVCP is planning to build five more houses in Akiak in 2007. This new landfill will close the old one which is near the new subdivision and open a new one away from the village. This landfill will serve the new houses as well as the existing houses.

Ongoing Funding: Akiak's water-sewer project will be in place and the project closeout and warranty will begin in 2007.

COST ESTIMATE

Scope Item	Funding Source	Quantity Units		Health Impact
				Tier
Solid Waste B (Closure) - Closure, solid waste site	IHS Regular	1	Ac.	D
Solid Waste C (Development) - Development, solid waste site	IHS Regular	3	Ac.	D

Health Impact Tier: A - First Service
 B - Regulatory Compliance
 C - Essential Upgrades
 D - Beneficial Upgrades
 E - Desired Upgrades

Total Costs: \$1,350,000.00

DISCLAIMER: Data displayed below is for informational purposes only.

EXISTING DEFICIENCIES:

- Water:** Potable Water system consist of 4-inch PVC water mains that extend throughout the entire community. These mains experience leaks on a regular basis and have exceeded their 20 year life cycle.
- Sewer:** Collection system currently consist of approximately 1222ft of 8-inch PVC and 626 ft of 6-inch PVC gravity lines. It also includes a septic tank/ lift station with approximately 1135 ft of 1.5inch HDPE SDR 11 force main which connects directly to the 6-inch mains. These mains experience leaks on a regular basis and have exceeded their 20 year life cycle.
- Solid Waste:** None
- O & M:** None

PROPOSED FACILITIES:

- Water:** ANTHC will replace all of the Water Mains with 6-inch HDPE. An additional 600ft will be added to their existing system to loop the existing dead end water mains to improve system hydraulics and fire prevention.
- Sewer:** ANTHC will replace all of the dated sewer main and distribution lines.
- Solid Waste:** None
- O & M:** None

COST ESTIMATE

Scope Item	Funding Source	Quantity	Units	Health Impact Tier
WATER DISTRIBUTION - Mains, direct bury, water distribution	IHS Regular	4400	Ft.	C
SEWER COLLECTION - Force mains, direct bury, sewer collection	IHS Regular	3000	Ft.	C

Health Impact Tier: A - First Service
B - Regulatory Compliance
C - Essential Upgrades
D - Beneficial Upgrades
E - Desired Upgrades

Total Costs: \$3,130,000.00

DISCLAIMER: Data displayed below is for informational purposes only.

EXISTING DEFICIENCIES:

Water: Homes across river have no service. No strategy to serve them. Need study to assess homes and plan improvements.
Sewer: Homes across river have no service. No strategy to serve them. Need study to assess homes and plan improvements.
Solid Waste: None
O & M: None

PROPOSED FACILITIES:

Water: Serve 13 homes NOTE: -15 Pts applied until the study is complete and a final cost estimate is complete.
Sewer: Serve 13 homes
Solid Waste: None
O & M: None

COST ESTIMATE

Scope Item	Funding Source	Quantity	Units	Health Impact Tier
SEWER COLLECTION - In-house plumbing, vacuum, sewer collection	IHS Regular	15	Ea.	A
WATER DISTRIBUTION - In-house plumbing, water distribution	IHS Regular	15	Ea.	A
SEWER COLLECTION - Service lines, above ground, sewer collection	IHS Regular	15	Ft.	A
WATER DISTRIBUTION - Service lines, above ground, water distribution	IHS Regular	15	Ft.	A
SEWER COLLECTION - Mains, above ground, sewer collection	IHS Regular	2500	Ft.	A
WATER DISTRIBUTION - Mains, above ground, water distribution	IHS Regular	2500	Ft.	A

Health Impact Tier: A - First Service
 B - Regulatory Compliance
 C - Essential Upgrades
 D - Beneficial Upgrades
 E - Desired Upgrades

Total Costs: \$1,784,340.00

DISCLAIMER: Data displayed below is for informational purposes only.

EXISTING DEFICIENCIES:

Water: None.

Sewer: None.

Solid Waste: Open disposal site not permitted. Historical improperly abandoned dump from 1980's is eroding at a traditionally boat landing site in continuing usage.

O & M: None

PROPOSED FACILITIES:

Water: None.

Sewer: None.

Solid Waste: Ph I. Closure plan and closure of historical dump. Ph II, not in this request, Design and develop solid waste disposal site, close existing dump.

O & M: None

COST ESTIMATE

Scope Item	Funding Source	Quantity	Units	Health Impact	
				Tier	
Solid Waste B (Closure) - Closure, solid waste site	IHS Regular	1	Ac.	D	
Solid Waste C (Development) - Study, solid waste	IHS Regular	1	Ls.	B	
Health Impact Tier: A - First Service B - Regulatory Compliance C - Essential Upgrades D - Beneficial Upgrades E - Desired Upgrades					

Total Costs: \$330,000.00

DISCLAIMER: Data displayed below is for informational purposes only.

EXISTING DEFICIENCIES:

Water: Self haul in lower village.

Sewer: Pit privies used in lower village.

Solid Waste: Permitted SW site utilized.

O & M: O&M organization requires additional training.

PROPOSED FACILITIES:

Water: Install haul water system and in-house plumbing. Purchase water haul vehicle.

Sewer: Install haul sewer system and in-house plumbing. Purchase sewer haul vehicle.

Solid Waste: None

O & M: None

COST ESTIMATE

Scope Item	Funding Source	Quantity	Units	Health Impact Tier
WATER DISTRIBUTION - In-house plumbing, water distribution	IHS Regular	48	Ea.	A
WATER DISTRIBUTION - Haul vehicle, water distribution	IHS Regular	1	Ea.	A
SEWER COLLECTION - In-house plumbing, gravity, sewer collection	IHS Regular	48	Ea.	A
SEWER COLLECTION - Haul vehicle, sewer collection	IHS Regular	1	Ea.	A
SEWER COLLECTION - Foundation - thermosyphen gravel pad, sewer collection	IHS Regular	2000	Sf.	A
SEWER COLLECTION - Shop / garage, no foundation, sewer collection	IHS Regular	2000	Sf.	A

Health Impact Tier: A - First Service
 B - Regulatory Compliance
 C - Essential Upgrades
 D - Beneficial Upgrades
 E - Desired Upgrades

Total Costs: \$4,595,942.00

DISCLAIMER: Data displayed below is for informational purposes only.

EXISTING DEFICIENCIES:

Water: 20 homes lack water service.

Sewer: 20 homes lack sewer service.

Solid Waste:

O & M:

PROPOSED FACILITIES:

Water: Piped water to 20 homes, including service line and indoor plumbing.

Sewer: Piped sewer to 20 homes, including service line and indoor plumbing.

Solid Waste:

O & M:

COST ESTIMATE

Scope Item	Funding Source	Quantity	Units	Health Impact Tier
SEWER COLLECTION - Mains, above ground, sewer collection	IHS Regular	6000	Ft.	A
SEWER COLLECTION - In-house plumbing, gravity, sewer collection	IHS Regular	16	Ea.	A
SEWER COLLECTION - Service lines, above ground, sewer collection	IHS Regular	800	Ft.	A
WATER DISTRIBUTION - Mains, above ground, water distribution	IHS Regular	8600	Ft.	A
WATER DISTRIBUTION - In-house plumbing, water distribution	IHS Regular	16	Ea.	A
WATER DISTRIBUTION - Service lines, above ground, water distribution	IHS Regular	800	Ft.	A

Health Impact Tier: A - First Service
 B - Regulatory Compliance
 C - Essential Upgrades
 D - Beneficial Upgrades
 E - Desired Upgrades

Total Costs: \$3,610,714.00

DISCLAIMER: Data displayed below is for informational purposes only.

EXISTING DEFICIENCIES:

Water: None

Sewer: None

Solid Waste: Class III landfill fencing is failing due to severe frost jacking. The base of chain link fencing around the site perimeter is uniformly lifted approximately 18" above ground level. The fencing does not contain trash on site. The landfill disposal cell retains water. Site grading needs to be re-established and dewatering drainage installed.

O & M: None

PROPOSED FACILITIES:

Water: None

Sewer: None

Solid Waste: Reinstall perimeter fencing using chance anchors to prevent future frost jacking. Regrade landfill site to provide adequate site drainage and purchase O&M trash pump to dewater landfill cell.

O & M: None

COST ESTIMATE

Scope Item	Funding Source	Quantity	Units	Health Impact
				Tier
Solid Waste C (Development) - Other solid waste	IHS Regular	1	Ls.	D
Health Impact Tier: A - First Service B - Regulatory Compliance C - Essential Upgrades D - Beneficial Upgrades E - Desired Upgrades				

Total Costs: \$300,000.00

DISCLAIMER: Data displayed below is for informational purposes only.**EXISTING DEFICIENCIES:****Water:** None**Sewer:** None**Solid Waste:** The Village currently has funding from EPA to build a new permitted landfill. They have the minimum equipment necessary to construct the landfill, but they need a Dozer to properly maintain the landfill once it is operating.**O & M:** Village currently lacks training to manage and operate a solid waste landfill.**PROPOSED FACILITIES:****Water:** None**Sewer:** None**Solid Waste:** Provide the village with a dozer to maintain the landfill over the course of its life.**O & M:** None**COST ESTIMATE**

Scope Item	Funding Source	Quantity	Units	Health Impact Tier
Solid Waste C (Development) - Equipment, solid waste	IHS Regular	1	Ls.	D
Solid Waste C (Development) - Development, solid waste site	IHS Regular	1	Ac.	D

Health Impact Tier:

- A - First Service
- B - Regulatory Compliance
- C - Essential Upgrades
- D - Beneficial Upgrades
- E - Desired Upgrades

Total Costs: \$700,000.00

DISCLAIMER: Data displayed below is for informational purposes only.**EXISTING DEFICIENCIES:****Water:** A community water system has never been provided for the community.**Sewer:** A community sewer system has never been provided for the community.**Solid Waste:** None**O & M:** None**PROPOSED FACILITIES:****Water:** Construct a circulating water system, water service lines, house plumbing, water storage tank, water treatment plant and a well. All will serve as the community water system.**Sewer:** Construct a sewage collection system, community lift station, force main, lagoon, service lines and lagoon expansion. All will serve as the community sewer system.**Solid Waste:** None**O & M:** None**COST ESTIMATE**

Scope Item	Funding Source	Quantity	Units	Health Impact
				Tier
Water, Other - General estimate, water other	IHS Regular	1	Ls.	A
Sewer, Other - General estimate, sewer other	IHS Regular	1	Ls.	A
Health Impact Tier: A - First Service B - Regulatory Compliance C - Essential Upgrades D - Beneficial Upgrades E - Desired Upgrades				

Total Costs: \$23,377,100.00

DISCLAIMER: Data displayed below is for informational purposes only.**DRAFT****EXISTING DEFICIENCIES:**

Water: Aleknagik's North Shore West area is characterized by a high density of wells and small lot sizes. Several homes are on shared wells which have resulted in ownership disputes. The need for individual water sources was acknowledged but upon further investigation it was revealed that the area was so densely populated that any attempts at developing local water sources would violate separation distance regulations pertaining to contamination prevention. Further, it was noted that several existing wells are currently out of compliance with separation distance criteria for adequate separation from septic tanks and REPS units which pump effluent to a community lagoon via a low pressure sewer. Concerns have also been raised that fuel spills in the area may have an effect on wells in the area. A groundwater study is being completed to analyze the potential impact to the area wells.

Sewer: None

Solid Waste: None

O & M: None

PROPOSED FACILITIES:

Water: This project proposes to construct a new piped water system to serve the North Shore West area. The system will include a new community well, a water treatment plant, deep bury 4" water main, and 1" service connections.

Sewer: None

Solid Waste: None

O & M: None

CIP Details:

Related Projects: There is a new \$20M bridge that has been funded by the Alaska DOT program, that is scheduled to be designed and built in 2011. The right of way acquisition is occurring in 2009.

Ongoing Funding: There is \$794,894 left in an ongoing sanitation project that was funded to provide on-site water and wastewater systems to individual homes. The project is currently on hold because of the separation distances issues between the wells and septic systems. This project proposal will help the previously funded project to proceed, and will be used to serve homes outside of the proposed community system.

COST ESTIMATE

Scope Item	Funding Source	Quantity Units		Health Impact
				Tier
WATER SOURCE - Ground water well, water source	IHS Regular	1	Ea.	C

WATER TREATMENT - Treatment plant, new, no foundation, water treatment	IHS Regular	1200	Sf.	C
WATER DISTRIBUTION - Mains, direct bury, water distribution	IHS Regular	2900	Ft.	C
WATER DISTRIBUTION - Service lines, direct bury, water distribution	IHS Regular	2700	Ft.	C
WATER TREATMENT - Foundation - concrete foundation	IHS Regular	1200	Sf.	C

Health Impact Tier: A - First Service
 B - Regulatory Compliance
 C - Essential Upgrades
 D - Beneficial Upgrades
 E - Desired Upgrades

Total Costs: \$4,027,500.00

DISCLAIMER: Data displayed below is for informational purposes only.**Updates Completed By Engineer****EXISTING DEFICIENCIES:****Water:** None

Sewer: The community percolation cell is currently overloaded due to increased use. Since the lagoon facility was built in 1987, the school has been tied into the system which has almost doubled the loading. Several homes on the North Shore West area are on shared septic tanks which has led to tank surcharge events. The shared systems have also led to disputes in the past over who the responsible party is when repairs are required.

Solid Waste: None**O & M:** None**PROPOSED FACILITIES:****Water:** None

Sewer: Install new septic tanks and rep's units that will pump effluent to an expanded lagoon via a new buried low pressure sewer line. Expand lagoon.

Solid Waste: None**O & M:** None**CIP Details:**

Related Projects: There is a new \$20M bridge that has been funded by the Alaska DOT program, that is scheduled to be designed and built in 2011. The right of way acquisition is occurring in 2009.

Ongoing Funding: There is \$794,894 left in an ongoing sanitation project that was funded to provide on-site water and wastewater systems to individual homes. The project is currently on hold because of the separation distances issues between the wells and septic systems. This project proposal will help the previously funded project to proceed, and will be used to serve homes outside of the proposed community system.

COST ESTIMATE

Scope Item	Funding Source	Quantity	Units	Health Impact Tier
SEWER COLLECTION - Lift station, sewer collection	IHS Regular	20	Ea.	C
SEWER COLLECTION - Mains, direct bury, sewer collection	IHS Regular	2725	Ft.	C
SEWER TREATMENT - Lagoon, borrow local material, sewer treatment	IHS Regular	1	Ac.	C
SEWER TREATMENT - Septic tank/drainfield, individual, sewer treatment	IHS Regular	20	Ea.	C

Health Impact Tier: A - First Service
 B - Regulatory Compliance
 C - Essential Upgrades
 D - Beneficial Upgrades
 E - Desired Upgrades

Total Costs: \$3,609,375.00

DISCLAIMER: Data displayed below is for informational purposes only.

EXISTING DEFICIENCIES:

Water: None

Sewer: A majority of the existing sewer main on the south side was constructed in 1972 of 4" PVC pipe. Infrastructure is now aging and many lines experience breakage each year.

Solid Waste: None

O & M: None

PROPOSED FACILITIES:

Water: None

Sewer: Replace approximately 1,300 LF of sewer main.

Solid Waste: None

O & M: None

COST ESTIMATE

Scope Item	Funding Source	Quantity	Units	Health Impact Tier
SEWER COLLECTION - Mains, direct bury, sewer collection	IHS Regular	1300	Ft.	C
SEWER COLLECTION - Service lines, direct bury, sewer collection	IHS Regular	1600	Ft.	C
SEWER COLLECTION - Mains, direct bury, sewer collection	Other	1	Ft.	C
SEWER COLLECTION - Service lines, direct bury, sewer collection	Other	1	Ft.	C

Health Impact Tier: A - First Service
 B - Regulatory Compliance
 C - Essential Upgrades
 D - Beneficial Upgrades
 E - Desired Upgrades

Total Costs: \$1,234,675.00

DISCLAIMER: Data displayed below is for informational purposes only.

EXISTING DEFICIENCIES:

Water: None

Sewer: Sections of sewer main on the north side were constructed in 1972, 1982 and 1989. The older mains are PVC pipe and are aging, with breakage occurring each year.

Solid Waste: None

O & M: None

PROPOSED FACILITIES:

Water: None

Sewer: Replace approximately 3,760 LF of sewer main.

Solid Waste: None

O & M: None

COST ESTIMATE

Scope Item	Funding Source	Quantity	Units	Health Impact Tier
SEWER COLLECTION - Mains, direct bury, sewer collection	IHS Regular	4482	Ft.	C
SEWER COLLECTION - Service lines, direct bury, sewer collection	IHS Regular	4700	Ft.	C
SEWER COLLECTION - Mains, direct bury, sewer collection	Other	280	Ft.	C
SEWER COLLECTION - Service lines, direct bury, sewer collection	Other	1500	Ft.	C

Health Impact Tier: A - First Service
B - Regulatory Compliance
C - Essential Upgrades
D - Beneficial Upgrades
E - Desired Upgrades

Total Costs: \$3,923,824.00

DISCLAIMER: Data displayed below is for informational purposes only.

DRAFT

EXISTING DEFICIENCIES:

Water: Due to issues with naturally occurring asbestos (NOA) gravel in the community, NIHA has been forced to pass over the community several times when considering the construction of new HUD homes. However, recently passed NOA gravel legislation in 2012 makes a project possible to build ten new homes in the community. This will require an extension of the water main to the new subdivision and service line installations for first time services.

Sewer: Due to issues with naturally occurring asbestos (NOA) gravel in the community, NIHA has been forced to pass over the community several times when considering the construction of new HUD homes. However, recently passed NOA gravel legislation in 2012 makes a project possible to build ten new homes in the community. This will require an extension of the sewer collection main to the new subdivision and service line installations for first time services.

Solid Waste: None

O & M: None

PROPOSED FACILITIES:

Water: Extend the North Loop circulation water main 1,100 LF and install 10 new water service lines for first time service to these homes.

Sewer: Extend the North Loop sewer collection main 600 LF and install 10 new sewer service lines for first time service to these homes.

Solid Waste: None

O & M: None

CIP Details:

Related Projects: 1. An ICDBG grant has been applied for by the Village of Ambler for \$600,000 to construct the gravel roads to the new subdivision and gravel pads for the homes. NIHA has added \$200,000 of their FY13 IHBG funding as a contribution. 2. NIHA has committed to constructing the ten new homes.

Ongoing Funding:

COST ESTIMATE

Scope Item	Funding Source	Quantity	Units	Health Impact Tier
SEWER COLLECTION - Mains, direct bury, sewer collection	IHS Regular	600	Ft.	A
SEWER COLLECTION - Service lines, direct bury, sewer collection	IHS Regular	1000	Ft.	A
WATER DISTRIBUTION - Mains, direct bury, water distribution	IHS Regular	1100	Ft.	A

WATER DISTRIBUTION - Service lines, direct bury, water distribution	IHS Regular	1000	Ft.	A
Water, Other - Professional Services (engineering)	IHS Regular	1	Ls.	A
Sewer, Other - Professional Services (engineering)	IHS Regular	1	Ls.	A
Water, Other - Professional Services (engineering)	IHS Regular	1	Ls.	A
Sewer, Other - Professional Services (engineering)	IHS Regular	1	Ls.	A
Sewer, Other - Other sewer	Other	1	Ls.	A
Water, Other - Other water	Other	1	Ls.	A
WATER DISTRIBUTION - In-house plumbing, water distribution	Other	10	Ea.	A
SEWER COLLECTION - In-house plumbing, gravity, sewer collection	Other	10	Ea.	A

Health Impact Tier: A - First Service
 B - Regulatory Compliance
 C - Essential Upgrades
 D - Beneficial Upgrades
 E - Desired Upgrades

Total Costs: \$2,174,040.00

DISCLAIMER: Data displayed below is for informational purposes only.

EXISTING DEFICIENCIES:

Water: The heat tape in the old section of raw water transmission line is compromised (keeps tripping the ground fault). The line itself is undersized for both transmission and circulation flows. Transmission flows are 25% of what they should be due to an unknown blockage in the line.

Sewer: None

Solid Waste: None

O & M: None

PROPOSED FACILITIES:

Water: Design and construct 900 LF of replacement raw transmission line.

Sewer: None

Solid Waste: None

O & M: None

COST ESTIMATE

Scope Item	Funding Source	Quantity	Units	Health Impact
				Tier
Water, Other - Other water	IHS Regular	1	Ls.	D
Water, Other - Professional Services (engineering)	IHS Regular	1	Ls.	D
Water, Other - Other water	Other	1	Ls.	D
Water, Other - Professional Services (engineering)	IHS Regular	1	Ls.	D

Health Impact Tier: A - First Service
 B - Regulatory Compliance
 C - Essential Upgrades
 D - Beneficial Upgrades
 E - Desired Upgrades

Total Costs: \$503,209.00

DISCLAIMER: Data displayed below is for informational purposes only.

EXISTING DEFICIENCIES:

Water: The groundwater wells lack critical river erosion protection.

Sewer: None

Solid Waste: None

O & M: None

PROPOSED FACILITIES:

Water: Intall rip rap protection measures on the river embankment directly in front and immediately upstream of the wells.

Sewer: None

Solid Waste: None

O & M: None

COST ESTIMATE

Scope Item	Funding Source	Quantity	Units	Health Impact
				Tier
Water, Other - Other water	IHS Regular	1	Ls.	E
Water, Other - Professional Services (engineering)	IHS Regular	1	Ls.	E
Water, Other - Professional Services (engineering)	IHS Regular	1	Ls.	E
Health Impact Tier: A - First Service B - Regulatory Compliance C - Essential Upgrades D - Beneficial Upgrades E - Desired Upgrades				

Total Costs: \$504,563.00

DISCLAIMER: Data displayed below is for informational purposes only.

EXISTING DEFICIENCIES:

Water: Tribal Office and Native Village Store currently without water service.

Sewer: Tribal Office and Native Village Store currently without sewer service.

Solid Waste: None

O & M: None

PROPOSED FACILITIES:

Water: Extend south loop to provide first service to Tribal Office and Native Store.

Sewer: Extend south loop sewer main to provide first service Tribal Office and Native Store.

Solid Waste: None

O & M: None

COST ESTIMATE

Scope Item	Funding Source	Quantity	Units	Health Impact Tier
SEWER COLLECTION - Mains, direct bury, sewer collection	IHS Regular	1710	Ft.	A
WATER DISTRIBUTION - Mains, direct bury, water distribution	IHS Regular	1272	Ft.	A
SEWER COLLECTION - Service lines, direct bury, sewer collection	IHS Regular	700	Ft.	A
WATER DISTRIBUTION - Service lines, direct bury, water distribution	IHS Regular	700	Ft.	A

Health Impact Tier: A - First Service
 B - Regulatory Compliance
 C - Essential Upgrades
 D - Beneficial Upgrades
 E - Desired Upgrades

Total Costs: \$1,337,946.00

DISCLAIMER: Data displayed below is for informational purposes only.

EXISTING DEFICIENCIES:

Water: The existing south water loop was constructed in 1975 out of 4" PVC arctic pipe with bell and spigot connections. Due to ground movement related to seasonal freeze/thaw, the City reports that several line breaks have occurred each winter, with increasing frequency over the past several years.

Sewer: None

Solid Waste: None

O & M: None

PROPOSED FACILITIES:

Water: This project consists of the construction of 4,850 feet of HDPE arctic pipe water and service lines to existing native homes. It also includes arctic flush hydrants. Design is complete and has been approved for construction by ADEC.

Sewer: None

Solid Waste: None

O & M: None

COST ESTIMATE

Scope Item	Funding Source	Quantity	Units	Health Impact Tier
WATER DISTRIBUTION - Mains, direct bury, water distribution	IHS Regular	4850	Ft.	C
WATER DISTRIBUTION - Service lines, direct bury, water distribution	IHS Regular	2800	Ft.	C
Water, Other - Professional Services (engineering)	VSW/RD	1	Ls.	C
Water, Other - Other water	Other	1	Ls.	A

Health Impact Tier: A - First Service
 B - Regulatory Compliance
 C - Essential Upgrades
 D - Beneficial Upgrades
 E - Desired Upgrades

Total Costs: \$3,763,009.00

DISCLAIMER: Data displayed below is for informational purposes only.

EXISTING DEFICIENCIES:

Water: A majority of the North Water Loop was constructed in 1982 as 4" PVC arctic pipe. The system is aging and experiences high volumes of leakage. Homes on the loop are either experiencing deficiencies with their water service lines or do not have service.

Sewer:

Solid Waste: None

O & M: None

PROPOSED FACILITIES:

Water: Design and construct a replacement for the north water loop. Reconnect or provide first time service to homes located along the proposed water main.

Sewer:

Solid Waste: None

O & M: None

COST ESTIMATE

Scope Item	Funding Source	Quantity	Units	Health Impact Tier
WATER DISTRIBUTION - Mains, direct bury, water distribution	IHS Regular	5160	Ft.	C
WATER DISTRIBUTION - Service lines, direct bury, water distribution	IHS Regular	3900	Ft.	C
Water, Other - Professional Services (engineering)	IHS Regular	1	Ls.	C
Water, Other - Other water	IHS Regular	1	Ls.	C
Water, Other - Other water	Other	1	Ls.	C

Health Impact Tier: A - First Service
B - Regulatory Compliance
C - Essential Upgrades
D - Beneficial Upgrades
E - Desired Upgrades

Total Costs: \$3,382,669.00

DISCLAIMER: Data displayed below is for informational purposes only.

EXISTING DEFICIENCIES:

Water: None

Sewer: None

Solid Waste: The solids waste site consists of an unpermitted open dump which covers several acres. The site is unfenced, and indiscriminate disposal of solid waste has occurred.

O & M: None

PROPOSED FACILITIES:

Water: None

Sewer: None

Solid Waste: Close out the old landfill, develop new landfill (adjacent to existing site) and solid waste management plan.

O & M: None

COST ESTIMATE

Scope Item	Funding Source	Quantity	Units	Health Impact Tier
Solid Waste C (Development) - Development, solid waste site	IHS Regular	6	Ac.	D
Solid Waste B (Closure) - Closure, solid waste site	IHS Regular	10	Ac.	D
Solid Waste C (Development) - Professional Services (engineering)	IHS Regular	1	Ls.	D

Health Impact Tier: A - First Service
 B - Regulatory Compliance
 C - Essential Upgrades
 D - Beneficial Upgrades
 E - Desired Upgrades

Total Costs: \$1,502,691.00

DISCLAIMER: Data displayed below is for informational purposes only.

EXISTING DEFICIENCIES:

Water: The operator reports that the lake level has periodically dropped to low levels due to sustained low rainfall periods in the past, resulting in very low water levels in the wetwell. Water levels will also decrease if the beaver dams that form the lake are ever abandoned. Low water levels cause routine pump failures resulting in a loss of water. The wet well intake structure is insulated with board stock insulation, which has been broken and damaged due to pump repair and replacement.

Sewer: None

Solid Waste: None

O & M: None

PROPOSED FACILITIES:

Water: The project would consist of the Hood Mountain Preliminary Design and Environmental Impact Study and regulatory permitting followed by construction. Activities would include the preparation of an environmental impact statement, conferences with land managers and interested regulatory agencies, archeological clearances, and report preparation. Other agency permits would include the ADEC, Alaska Department of Fish and Game, and land easements. Preliminary design includes field surveying and topographic mapping, preliminary pipeline alignment, soils evaluation of the dam sites and pipeline, and preliminary component design. Gravity water source from three small mountain stream impoundments. A 16,500 foot long 12" diameter raw water transmission line and access road to the impoundments.

Sewer: None

Solid Waste: None

O & M: None

COST ESTIMATE

Scope Item	Funding Source	Quantity	Units	Health Impact Tier
WATER SOURCE - Surface water impoundment, water source	IHS Regular	3	Ea.	C
Water, Other - Road, water other	IHS Regular	16500	Ft.	C
WATER DISTRIBUTION - Mains, direct bury, water distribution	IHS Regular	16500	Ft.	C
Water, Other - Other water	IHS Regular	1	Ls.	C

Health Impact Tier: A - First Service
 B - Regulatory Compliance
 C - Essential Upgrades
 D - Beneficial Upgrades
 E - Desired Upgrades

Total Costs: \$6,579,990.00

DISCLAIMER: Data displayed below is for informational purposes only.

DRAFT

EXISTING DEFICIENCIES:

Water: None

Sewer: The Kootznahoo lift station is in need of rehabilitation/replacement. Currently, due to age, pump capacity and electrical issues with the Kootznahoo Road lift station, wastewater discharges to the surface and/or adjacent straight (water body) on a regular basis (directly on to the property of several residential properties and one community elder [Mabel Jack's]) and causes a direct impact to public health and safety for all of the residents of the community (birds have been observed in the area of the spills feeding and flying to other locations within the community). Discharges are estimated to have exceeded 500-gallons which is the threshold that requires reporting to the ADEC. Additionally, this station is over 30 years old and has passed its effective design life and a confined space permit is required each time an operator is required to enter the dry well of the station. The Kootznahoo lift station requires a much greater than typical amount of O&M activities to be performed on a regular basis in order to keep it minimally functional. This is due to its age and condition and is leading to excess O&M costs for the community as well as causing a significant threat to the health and safety of the public. Additionally, the community outfall has begun to leak noticeably and the community septic tanks backed up causing a State of Alaska investigation during summer 2013. The results of the investigation were that the outfall appears to be partially blocked less than 30' from the bottom of the septic tanks. Replacement of the upper portion of the sewer outfall and both of the community septic tanks was recommended and the City has successfully pursued a State of Alaska Appropriation to replace the tanks and repair the outfall.

Solid Waste: None

O & M: None

PROPOSED FACILITIES:

Water: None

Sewer: Replace Kootznahoo Lift Station with a modern submersible lift station. Replace the community septic tanks and sewage outfall.

Solid Waste: None

O & M: None

CIP Details:

Related Projects:

Ongoing Funding:

COST ESTIMATE

Scope Item	Funding Source	Quantity Units	Health Impact Tier
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SEWER COLLECTION - Lift station, sewer collection	IHS Regular	1	Ea.	C
SEWER TREATMENT - Septic tank, community, sewer treatment	Other	2	Ea.	B
SEWER TREATMENT - Ocean outfall, sewer treatment	Other	1	Ft.	B

Health Impact Tier: A - First Service
 B - Regulatory Compliance
 C - Essential Upgrades
 D - Beneficial Upgrades
 E - Desired Upgrades

Total Costs: \$2,483,500.00

DISCLAIMER: Data displayed below is for informational purposes only.

EXISTING DEFICIENCIES:

- Water:** The existing water distribution system piping arrangement does not allow for turnover of water in the older 500k water storage tank. High levels of disinfection by-products have been documented in the distribution system. The older 500,000 gallon water storage tank and 150,000 gallon stand pipe have extensive external corrosion with rust and some leakage at the joints. A more complete assessment is required to assess their structural condition, but at a minimum, a major repainting of the tanks is required. The transfer pump between the 500,000 gallon tank and the standpipe is located in a pit which makes servicing it difficult and causes a confined space environment. Several leaks near the fire hydrants were noted during the water and sewer master plan. Approximately 1/2 of the water produced by the WTP is lost through leakage and wasting in the distribution system.
- Sewer:** Piping system at Kootznoowoo Rd lift station results in the pump check valve becoming clogged and the pump not working. Water tap to lift station is not adequately protected from back flow into water system. Chatham Road lift station electrical panel is exposed to the weather and difficult to work on.
- Solid Waste:** None
- O & M:** None

PROPOSED FACILITIES:

- Water:** Install 2,100 lf of buried ductile iron pipe, remove buried booster station from service, install new pressure reducing valve vault to regulate pressure to lower pressure zone, paint older 500,000 gallon water storage tank, repair and replace leaking fire hydrants, perform a leak detection survey. Install individual water meters at each residence.
- Sewer:** Install new pump discharge piping at the Kootznoowoo Rd lift station and install backflow prevention device on the water service to the lift station. Perform piping and electrical improvements at the Old Chatham Road lift station.
- Solid Waste:** None
- O & M:** None

COST ESTIMATE

Scope Item	Funding Source	Quantity	Units	Health Impact Tier
WATER DISTRIBUTION - Mains, direct bury, water distribution	IHS Regular	2100	Ft.	D
Water, Other - Study, water other	IHS Regular	1	Ls.	D
Water, Other - Other water	IHS Regular	1	Ls.	D
WATER DISTRIBUTION - Water storage tank, no foundation, water distribution	IHS Regular	650000	Gal.	E

Water, Other - Other water	IHS Regular	1	Ls.	E
Water, Other - Other water	IHS Regular	1	Ls.	E

Health Impact Tier: A - First Service
 B - Regulatory Compliance
 C - Essential Upgrades
 D - Beneficial Upgrades
 E - Desired Upgrades

Total Costs: \$1,218,600.00

DISCLAIMER: Data displayed below is for informational purposes only.

EXISTING DEFICIENCIES:

Water: Water Mains and services in the front street area are nearing the end of their design life. The community has received a grant to repair and shore up the road but still needs funding to replace the ailing utilities buried below the road and re-establish service connections to the homes within the affected area.

Sewer: Sewer Mains and services in the front street area are nearing the end of their design life. The community has received a grant to repair and shore up the road but still needs funding to replace the ailing utilities buried below the road and re-establish service connections to the homes within the affected area.

Solid Waste: None

O & M: None

PROPOSED FACILITIES:

Water: Replacement of Water Mains and services along the Front Street area including re-paving of the excavation area.

Sewer: Replacement of Water Mains and services along the Front Street area including re-paving of the excavation area.

Solid Waste: None

O & M: None

COST ESTIMATE

Scope Item	Funding Source	Quantity	Units	Health Impact Tier
SEWER COLLECTION - Mains, direct bury, sewer collection	IHS Regular	1200	Ft.	D
WATER DISTRIBUTION - Service lines, direct bury, water distribution	IHS Regular	1200	Ft.	D
SEWER COLLECTION - Service lines, direct bury, sewer collection	IHS Regular	650	Ft.	D
Water, Other - Other water	IHS Regular	1	Ls.	D
Sewer, Other - Other sewer	IHS Regular	1	Ls.	D
Sewer, Other - Road, sewer other	IHS Regular	1200	Ft.	D
Water, Other - Road, water other	IHS Regular	1200	Ft.	D
Water, Other - Road, water other	Other	1	Ft.	D
WATER DISTRIBUTION - Service lines, direct bury, water distribution	IHS Regular	650	Ft.	D
Sewer, Other - Road, sewer other	Other	1	Ft.	D

Health Impact Tier: A - First Service
 B - Regulatory Compliance
 C - Essential Upgrades
 D - Beneficial Upgrades
 E - Desired Upgrades

Total Costs: \$2,993,238.00

DISCLAIMER: Data displayed below is for informational purposes only.

EXISTING DEFICIENCIES:

Water: None

Sewer: None

Solid Waste: Unapproved open dump, no cover material, lots of bears, no equipment. Existing site is adjacent to residential properties planned for development, and is adjacent to heavily travelled ferry terminal access road.

O & M: No heavy equipment for operating landfill

PROPOSED FACILITIES:

Water: None

Sewer: None

Solid Waste: This project would include modifications to the existing landfill to allow for continued long term use, including closure of the existing work area, develop a new fill area along the north and south side of the landfill property.

O & M: None

COST ESTIMATE

Scope Item	Funding Source	Quantity	Units	Health Impact Tier
Solid Waste C (Development) - General estimate, solid waste	IHS Regular	1	Ls.	D
Solid Waste C (Development) - Shop / garage, no foundation, solid waste	IHS Regular	1200	Sf.	D
Solid Waste C (Development) - Equipment, solid waste	IHS Regular	1	Ls.	D

Health Impact Tier: A - First Service
 B - Regulatory Compliance
 C - Essential Upgrades
 D - Beneficial Upgrades
 E - Desired Upgrades

Total Costs: \$1,100,596.00

DISCLAIMER: Data displayed below is for informational purposes only.**DRAFT****EXISTING DEFICIENCIES:****Water:** None

Sewer: Lagoon does not have the capacity to adequately treat the sewage of the growing community: seepage in the primary cell does not allow for adequate treatment and lagoon is overloaded. All the community's sewage infiltrates into the first small cell, which does not have adequate detention time for treatment prior to percolating into the ground water. ADEC Wastewater Staff has indicated that action trigger levels for nitrate as N is 5 mg/l in monitoring wells. The lagoon was sampled in January, 2006 in 3 monitoring wells and had nitrate levels well above 5 mg/l. See attachments (3 lagoon sample results and email from ADEC Staff).

Solid Waste: None**O & M:** None**PROPOSED FACILITIES:****Water:** None

Sewer: Expand the existing lagoon by adding a third cell and lining the two primary cells to stop seepage. total size of the lagoon will be 12 acres.

Solid Waste: None**O & M:** None**CIP Details:****Related Projects:****Ongoing Funding:****COST ESTIMATE**

Scope Item	Funding Source	Quantity	Units	Health Impact Tier
SEWER TREATMENT - Lagoon, borrow local material, sewer treatment	IHS Regular	6	Ac.	D
Health Impact Tier: A - First Service B - Regulatory Compliance C - Essential Upgrades D - Beneficial Upgrades E - Desired Upgrades				

Total Costs: \$4,800,000.00

DISCLAIMER: Data displayed below is for informational purposes only.**EXISTING DEFICIENCIES:****Water:** None**Sewer:** None**Solid Waste:** Open disposal site.**O & M:** None**PROPOSED FACILITIES:****Water:** None**Sewer:** None**Solid Waste:** Develop site selection report, select site, SW Management Plan, rehabilitate existing site, move site, close existing site.**O & M:** None**COST ESTIMATE**

Scope Item	Funding Source	Quantity	Units	Health Impact Tier
Solid Waste A (Plan) - Management Plan, Solid Waste	IHS Regular	1	Ls.	E
Solid Waste C (Development) - Development, solid waste site	IHS Regular	3	Ac.	E
Solid Waste B (Closure) - Closure, solid waste site	IHS Regular	1	Ac.	E
Health Impact Tier: A - First Service B - Regulatory Compliance C - Essential Upgrades D - Beneficial Upgrades E - Desired Upgrades				

Total Costs: \$1,070,000.00

DISCLAIMER: Data displayed below is for informational purposes only.

DRAFT

EXISTING DEFICIENCIES:

- Water:** Many existing homes have wells that are non-functional or have poor water quality. Many residents haul water from neighboring wells or from the washeteria. Some homes downgradient of the sewage lagoon may be threatened by leachate contamination, although further testing is required. The proposed upgrades will allow for water service connections to existing and proposed community buildings, including a new health clinic, community multipurpose building, and community center.
- Sewer:** The sewage lagoon is unlined and is located upgradient of residential drinking water wells. Further monitoring is required to ensure that subsurface contamination from the release of untreated sewage is not affecting the residential drinking water supply. A total of five on-site systems are proposed for homes with malfunctioning and inadequate leachfields.
- Solid Waste:** None
- O & M:** None

PROPOSED FACILITIES:

- Water:** The washeteria serves as the sole source of safe drinking water, laundry facilities, and shower facilities to numerous residents and visitors. A replacement of the existing well is required to ensure that further deterioration of the water supply is not interrupted. If the facility is unavailable, residents may be required to haul water from untreated water sources; many residents may not have access to laundry and shower facilities. This project will also provide water service connections to a new health clinic, new community multipurpose building, and existing community center.
- Sewer:** Install monitoring system for existing unlined community sewage lagoon. Provide for water quality testing of residential drinking water wells downgradient of the lagoon. Install septic systems for homes with nonfunctioning or noncompliant on-site systems. Repairs to the sole community septage haul trailer.
- Solid Waste:** None
- O & M:** None

CIP Details:

- Related Projects:** The Anvik airport is currently undergoing an \$8,500,000 reconstruction that will lengthen the runway dimensions to 4,200 feet; lengthen the taxiway; relocate the apron and airport access road; and install airport lighting and navigation aids.
- Ongoing Funding:** A preliminary design analysis is scheduled for the existing water treatment plant and the accompanying water distribution system to serve the core area of Anvik. This project will include: 1.WTP upgrades and expansion • Existing and expanded washeteria usage • Additional services to new community multi-purpose building, and the new YKHC clinic 2. Recommended new well location and capacity review • Review of new water

quality data for current treatment requirements, and new Drinking Water Standards.

COST ESTIMATE

Scope Item	Funding Source	Quantity	Units	Health Impact Tier
Water, Other - Washeteria, water portion, no foundation, water other	IHS Regular	1000	Sf.	E
WATER SOURCE - Ground water well, water source	IHS Regular	1	Ea.	E
WATER TREATMENT - Treatment plant, rehabilitation, water treatment	IHS Regular	1	Ea.	E
Water, Other - Other water	IHS Regular	1	Ls.	E
WATER DISTRIBUTION - Service lines, direct bury, water distribution	IHS Regular	500	Ft.	E
Sewer, Other - Other sewer	IHS Regular	1	Ls.	E
SEWER TREATMENT - Lagoon, borrow local material, sewer treatment	IHS Regular	1	Ac.	E
SEWER TREATMENT - Septic tank/drainfield, individual, sewer treatment	IHS Regular	5	Ea.	C
SEWER COLLECTION - Haul vehicle, sewer collection	IHS Regular	1	Ea.	E

Health Impact Tier:

- A - First Service
- B - Regulatory Compliance
- C - Essential Upgrades
- D - Beneficial Upgrades
- E - Desired Upgrades

Total Costs: \$1,111,500.00

**DISCLAIMER: Data displayed below is for informational purposes only.
Updates Completed By Engineer**

EXISTING DEFICIENCIES:

Water: Existing water treatment plant and washeteria is aged and deteriorated condition more than 30 years old. The mechanical and water treatment components (two boilers, filters) are beyond their useful life and will not last longer. The washeteria components has a essence of replacements. So water treatment plant and washeteria is in a deperate need of replacement or upgrades at least.

Sewer: None

Solid Waste: None

O & M: None

PROPOSED FACILITIES:

Water: Provide Water treatment plant and washeteria upgrades

Sewer: None

Solid Waste: None

O & M: None

CIP Details:

Related Projects:

Ongoing Funding:

COST ESTIMATE

Scope Item	Funding Source	Quantity Units		Health Impact
				Tier
WATER TREATMENT - Treatment plant, rehabilitation, water treatment	IHS Regular	1	Ea.	C
Water, Other - General estimate, water other	IHS Regular	1	Ls.	C

Health Impact Tier: A - First Service
B - Regulatory Compliance
C - Essential Upgrades
D - Beneficial Upgrades
E - Desired Upgrades

Total Costs: \$305,000.00

DISCLAIMER: Data displayed below is for informational purposes only.

DRAFT

EXISTING DEFICIENCIES:

Water: The water source for Arctic Village is the Chandalar River. The access to the intake is over a steep embankment. The raw water intake is a gasoline pump placed on the river ice or in a boat depending on the season. In the past, portable electrical pump was used but the power source was eliminated when a fire destroyed the river pump box connection. Previous SDS project had insufficient funds to complete repairs to the intake.

Sewer: None

Solid Waste: None

O & M: None

PROPOSED FACILITIES:

Water: Construction of Jib Crane intake system which is already designed and preferred by the community.

Sewer: None

Solid Waste: None

O & M: None

CIP Details:

Related Projects: NAHASTA and HUD housing project abd BIA road project (4mile) will be initiated by July 2013.

Ongoing Funding: Construction of new combined WTP and washeteria facility begun in Fall 2012 will continue into 2013.

COST ESTIMATE

Scope Item	Funding Source	Quantity	Units	Health Impact Tier
WATER SOURCE - Surface water gallery, water source	IHS Regular	1	Ea.	C

Health Impact Tier: A - First Service
B - Regulatory Compliance
C - Essential Upgrades
D - Beneficial Upgrades
E - Desired Upgrades

Total Costs: \$500,000.00

DISCLAIMER: Data displayed below is for informational purposes only.

DRAFT

EXISTING DEFICIENCIES:

Water: Existing WTP and washeteria are can't meet treatment regulations and are undersized. Previous SDS grant was determined to be insufficient to complete the project based on Earn value reports and revised cost estimate. NOTICE: -15 Points applied. This project should be scored using the project in PDS with a similar scope to find the actual capital cost.

Sewer: None

Solid Waste: None

O & M: None

PROPOSED FACILITIES:

Water: New combined WTP and washeteria. This project would provide additional funding needed to complete the project. NOTICE: -15 Points applied. This project should be scored using the project in PDS with a similar scope to find the actual capital cost.

Sewer: None

Solid Waste: None

O & M: None

CIP Details:

Related Projects: NAHASTA and HUD housing project abd BIA road project (4mile) initiated in July 2013.

Ongoing Funding: Sanition Facilities Improvement Project

COST ESTIMATE

Scope Item	Funding Source	Quantity	Units	Health Impact Tier
WATER TREATMENT - Treatment plant, new, no foundation, water treatment	IHS Regular	1417	Sf.	A
WATER TREATMENT - Foundation - freeze back piles, water treatment	IHS Regular	1417	Sf.	A
WATER TREATMENT - Foundation - thermosyphen gravel pad, water treatment	IHS Regular	2158	Sf.	A
Water, Other - Washeteria, water portion, no foundation, water other	IHS Regular	895	Sf.	A
Sewer, Other - Washeteria, sewer portion, no foundation, sewer other	IHS Regular	895	Sf.	A
Water, Other - Foundation - freeze back piles, water other	IHS Regular	895	Sf.	A

Sewer, Other - Foundation - freeze back piles, sewer other	IHS Regular	895	Sf.	A
Water, Other - Foundation - thermosyphen gravel pad, water other	IHS Regular	895	Sf.	A
Water, Other - Other water	IHS Regular	1	Ls.	A

Health Impact Tier: A - First Service
 B - Regulatory Compliance
 C - Essential Upgrades
 D - Beneficial Upgrades
 E - Desired Upgrades

Total Costs: \$1,509,077.00

DISCLAIMER: Data displayed below is for informational purposes only.

DRAFT

EXISTING DEFICIENCIES:

Water: none

Sewer: Existing sewage lagoon is unlined and undersized, and in addition, the height of the lagoon is well below the Army Corps of Engineers recommended flood level elevation. The outfall from the manhole to the lagoon is deteriorated.

Solid Waste: None

O & M: None

PROPOSED FACILITIES:

Water: None

Sewer: Build an expanded lagoon with a sufficiently large footprint, is lined, and meets the Army Corps of Engineers recommended flood level elevation. Rebuild outfall line from the manhole to the lagoon. NOTE: This alternative, recommended in the 2006 feasibility study, would NOT provide the community with a means to dispose of honeybucket waste, which they currently dispose of in pit privies. A combined piped-and-honeybucket disposal lagoon would cost an additional \$500K, according to the 2006 study.

Solid Waste: None

O & M: None

CIP Details:

Related Projects: NAHASTA and HUD housing project and BIA road project (4mile) initiated in July 2013.

Ongoing Funding: Construction of new combined WTP and wastewater facility and improved water intake structure begun in Fall 2012.

COST ESTIMATE

Scope Item	Funding Source	Quantity	Units	Health Impact Tier
SEWER TREATMENT - Lagoon, borrow local material, sewer treatment	IHS Regular	1	Ac.	D
Health Impact Tier: A - First Service B - Regulatory Compliance C - Essential Upgrades D - Beneficial Upgrades E - Desired Upgrades				

Total Costs: \$2,622,842.00

DISCLAIMER: Data displayed below is for informational purposes only.

DRAFT

EXISTING DEFICIENCIES:

Water:

Sewer: Currently the community uses honey bucket waste and dispose in pit privies.

Solid Waste: None

O & M: None

PROPOSED FACILITIES:

Water: None

Sewer: Adequately sized waste water lagoon to meet the hydraulic loading of the community and accomodate piped sewer system. -15 points because no approved master plan to support pipes by the community

Solid Waste: None

O & M: None

CIP Details:

Related Projects: NAHASTA and HUD housing project abd BIA road project (4mile) initiated in July 2013.

Ongoing Funding: Construction of new combined WTP and washeteria facility begun in Fall 2012

COST ESTIMATE

Scope Item	Funding Source	Quantity	Units	Health Impact Tier
SEWER TREATMENT - Lagoon, borrow local material, sewer treatment	IHS Regular	2	Ac.	D

Health Impact Tier: A - First Service
B - Regulatory Compliance
C - Essential Upgrades
D - Beneficial Upgrades
E - Desired Upgrades

Total Costs: \$1,046,626.00

**DISCLAIMER: Data displayed below is for informational purposes only.
Updates Completed By Engineer**

EXISTING DEFICIENCIES:

Water: The existing water system is central watering point and washeteria only. The residents haul water from watering point according to their needs. The community lacks piped water distribution system, house service lines and in house plumbing.

Sewer:

Solid Waste: None

O & M: None

PROPOSED FACILITIES:

Water: Design and construction of single main pit orifice circulating water distribution system with service connections and inhouse plumbing. The project will service 56 existing homes with running water. -15 points because no approved master plan to support pipes by the community

Sewer:

Solid Waste: None

O & M: None

CIP Details:

Related Projects: NAHASTA and HUD housing project abd BIA road project (4mile) initiated in July 2013.

Ongoing Funding: Construction of new combined WTP and washeteria facility begun in Fall 2012 .

COST ESTIMATE

Scope Item	Funding Source	Quantity	Units	Health Impact Tier
WATER DISTRIBUTION - Mains, direct bury, water distribution	IHS Regular	9100	Ft.	A
WATER DISTRIBUTION - Service lines, direct bury, water distribution	IHS Regular	4360	Ft.	A
WATER DISTRIBUTION - In-house plumbing, water distribution	IHS Regular	46	Ea.	A

Health Impact Tier: A - First Service
B - Regulatory Compliance
C - Essential Upgrades
D - Beneficial Upgrades
E - Desired Upgrades

Total Costs: \$4,306,285.00

DISCLAIMER: Data displayed below is for informational purposes only.
Updates Completed By Engineer

EXISTING DEFICIENCIES:

Water:

Sewer: Currently the community uses honey bucket and dispose of in pit privies. The community lacks piped waste water collection, treatment and disposal facility, house service connections and adequately sized waste water lagoon to meet the hydraulic loading of the community.

Solid Waste: None

O & M: None

PROPOSED FACILITIES:

Water:

Sewer: Design and construction of low pressure waste water collection system with service connections and in house plumbing. -15 points because no approved master plan to support pipes by the community

Solid Waste: None

O & M: None

CIP Details:

Related Projects: NAHASTA and HUD housing project abd BIA road project (4mile) initiated in July 2013.

Ongoing Funding: Construction of new combined WTP and washeteria facility begun in Fall 2012.

COST ESTIMATE

Scope Item	Funding Source	Quantity	Units	Health Impact Tier
SEWER COLLECTION - Force mains, direct bury, sewer collection	IHS Regular	8506	Ft.	A
SEWER COLLECTION - Service lines, direct bury, sewer collection	IHS Regular	3780	Ft.	A
SEWER COLLECTION - In-house plumbing, gravity, sewer collection	IHS Regular	46	Ea.	A

Health Impact Tier: A - First Service
 B - Regulatory Compliance
 C - Essential Upgrades
 D - Beneficial Upgrades
 E - Desired Upgrades

Total Costs: \$4,146,620.00

**DISCLAIMER: Data displayed below is for informational purposes only.
Updates Completed By Engineer**

EXISTING DEFICIENCIES:

Water: None

Sewer: None

Solid Waste: Unapproved fenced open dump. Less than 1 mile from airstrip.

O & M: Need tools and training.

PROPOSED FACILITIES:

Water: None

Sewer: None

Solid Waste: Provide SW site selection report, select site, SW management plan, construct site with road , close old site, furnish equipment.

O & M: None

CIP Details:

Related Projects: NAHASTA and HUD housing project abd BIA road project (4mile) initiated in July 2013.

Ongoing Funding: Construction of new combined WTP and washeteria facility begun in Fall 2012.

COST ESTIMATE

Scope Item	Funding Source	Quantity	Units	Health Impact Tier
Solid Waste A (Plan) - Management Plan, Solid Waste	IHS Regular	1	Ls.	C
Solid Waste B (Closure) - Closure, solid waste site	IHS Regular	1	Ac.	C
Solid Waste C (Development) - Equipment, solid waste	IHS Regular	1	Ls.	C
Solid Waste C (Development) - Development, solid waste site	IHS Regular	1	Ac.	C
Solid Waste C (Development) - Road, solid waste	IHS Regular	10560	Ft.	C

Health Impact Tier: A - First Service
B - Regulatory Compliance
C - Essential Upgrades
D - Beneficial Upgrades
E - Desired Upgrades

Total Costs: \$2,589,480.00

DISCLAIMER: Data displayed below is for informational purposes only.

DRAFT

EXISTING DEFICIENCIES:

Water: Turbidity develops in this rotting wooden impoundment installed in 1978. Operator needs to clean this out frequently.

Sewer:

Solid Waste:

O & M:

PROPOSED FACILITIES:

Water: Upgrading the structure to reduce incoming turbidity. Filtration box similar to False Pass.

Sewer:

Solid Waste:

O & M:

CIP Details:

Related Projects: N/A

Ongoing Funding: N/A

COST ESTIMATE

Scope Item	Funding Source	Quantity Units		Health Impact
				Tier
WATER SOURCE - Surface water impoundment, water source	IHS Regular	1	Ea.	D
Water, Other - Road, water other	IHS Regular	220	Ft.	D

Health Impact Tier: A - First Service
B - Regulatory Compliance
C - Essential Upgrades
D - Beneficial Upgrades
E - Desired Upgrades

Total Costs: \$164,000.00

DISCLAIMER: Data displayed below is for informational purposes only.

EXISTING DEFICIENCIES:

Water: Leaks and low pressure between Old Atka wtp and the new subdivision. Possible fuel contamination in roadway has not been confirmed.

Sewer: None in this project

Solid Waste: None

O & M: None

PROPOSED FACILITIES:

Water: Transmission Main Replacement. 1800 LF from Old WTP to APS. Not recommended until population rebounds. Pop now 60.

Sewer: None

Solid Waste: None

O & M: None

COST ESTIMATE

Scope Item	Funding Source	Quantity	Units	Health Impact Tier
WATER DISTRIBUTION - Mains, direct bury, water distribution	IHS Regular	2850	Ft.	D
WATER DISTRIBUTION - Mains, direct bury, water distribution	IHS Regular	1800	Ft.	D

Health Impact Tier: A - First Service
 B - Regulatory Compliance
 C - Essential Upgrades
 D - Beneficial Upgrades
 E - Desired Upgrades

Total Costs: \$697,500.00

DISCLAIMER: Data displayed below is for informational purposes only.

EXISTING DEFICIENCIES:

Water: None

Sewer: None

Solid Waste: Burn box and fence needed. Unregistered Class III. No FAA waiver. Piles of waste (barrels in one area, junk vehicles in another, and general semi-segregated waste are unsecured along the road to the fenced area. See photos.

O & M: None

PROPOSED FACILITIES:

Water: None

Sewer: None

Solid Waste: Construct burn box on site, install fence. Prepare management plan, secure permits/waivers, fence area, provide burn box. Refer to a nonprofit assisting tribes to manage waste.

O & M: None

COST ESTIMATE

Scope Item	Funding Source	Quantity	Units	Health Impact Tier
Solid Waste C (Development) - Incinerator, solid waste	IHS Regular	1	Ea.	D

Health Impact Tier: A - First Service
B - Regulatory Compliance
C - Essential Upgrades
D - Beneficial Upgrades
E - Desired Upgrades

Total Costs: \$50,000.00

DISCLAIMER: Data displayed below is for informational purposes only.

DRAFT

EXISTING DEFICIENCIES:

- Water:** The existing water system is a central watering point and washeteria only. Water delivery is self haul. The homes are in need of interior plumbing for minimal water facilities but there is no community system available. The washeteria uses a single well water source. The well yield is not sufficient to support normal water use for a community with a piped water system. The water treatment facilities are not capable of providing treated water in the quantity required to meet the demand of a piped water system.
- Sewer:** Individual homes dispose of honey buckets at a dump station on a self haul basis and the Atmautluak Traditional Council operates small vehicle haul trailers to empty the dump stations in the lagoon. The homes are in need of interior plumbing for minimal wastewater facilities but there is no community system available. The washeteria waste water flows by gravity in above ground piping to a lift station and is pumped to the lagoon in an above ground pressure main. System failures are common due to freezing.
- Solid Waste:** Solid waste is disposed of in a tundra pond 1.5 miles up river This is an open dump There are ground water contamination problems There has never been adequate equipment provided to operate a land fill This dump site does not meet regulatory requirements.
- O & M:** None

PROPOSED FACILITIES:

- Water:** This project will renovate the washeteria building structure, replace the building mechanical systems, and replace the antiquated water treatment system. Waste heat from the electrical power plant is available and the Alaska Energy Authority has designed a system to preheat domestic hot water and building heat for the washeteria. This will greatly improve the financial ability of the community to maintain the facilities.
- Sewer:**
- Solid Waste:** None
- O & M:** None

CIP Details:

- Related Projects:** The Alaska Energy Authority (AEA) funded the design of a waste heat recovery project to serve the washeteria and the Community has applied for funding for construction though AEA The waste heat recovery project was approved and signed by the Govoner for \$350,000
- Ongoing Funding:** Project ATT.N85IHR is funded for design and construction of improvements to the gravity sewer from the Washeteria to the Lift station. Construction is scheduled for completion in the Spring of 2013. Project ATT.NA4IHR is funded for Improvements to the Washeteria foundation. Construction is scheduled for completion in the summer 2013. ATT.J74DCE is funded for Improvements to the Washeteria Construction is scheduled for completion in

the Fall 2013

COST ESTIMATE

Scope Item	Funding Source	Quantity	Units	Health Impact Tier
Sewer, Other - Other sewer	IHS Regular	1	Ls.	E
WATER TREATMENT - Treatment plant, rehabilitation, water treatment	IHS Regular	1	Ea.	E
Water, Other - Washeteria, water portion, no foundation, water other	IHS Regular	1	Sf.	E
Water, Other - Professional Services (engineering)	IHS Regular	1	Ls.	E

Health Impact Tier: A - First Service
 B - Regulatory Compliance
 C - Essential Upgrades
 D - Beneficial Upgrades
 E - Desired Upgrades

Total Costs: \$779,694.00

DISCLAIMER: Data displayed below is for informational purposes only.**EXISTING DEFICIENCIES:**

Water: The existing water system is a central watering point and washeteria only. Water delivery is self-haul. The homes are in need of interior plumbing for minimal water facilities but there is no community system available. The washeteria uses a single well water source. The well yield is not sufficient to support normal water use for a community with a piped water system. The water treatment facilities are not capable of providing treated water in the quantity required to meet the demand of a piped water system.

Sewer: Individual homes dispose of honey buckets at a dump station on a self haul basis and the Atmautluak Traditional Council operates small vehicle haul trailers to empty the dump stations in the lagoon. The homes are in need of interior plumbing for minimal wastewater facilities but there is no community system available. The washeteria waste water flows by gravity in above ground piping to a lift station and is pumped to the lagoon in an above ground pressure main. System failures are common due to freezing.

Solid Waste: None

O & M: None

PROPOSED FACILITIES:

Water: This project will construct a community water distribution system to include above ground water mains, water services lines, in-home water plumbing, water storage tank, water treatment plant, and a surface water intake.

Sewer: This project will construct a community vacuum wastewater system to include a vacuum station, sewer mains, service lines, force mains, in-home plumbing, and a lagoon.

Solid Waste: None

O & M: None

COST ESTIMATE

Scope Item	Funding Source	Quantity	Units	Health Impact Tier
WATER DISTRIBUTION - In-house plumbing, water distribution	IHS Regular	55	Ea.	A
WATER DISTRIBUTION - Mains, above ground, water distribution	IHS Regular	15250	Ft.	A
WATER TREATMENT - Treatment plant, new, no foundation, water treatment	IHS Regular	1500	Sf.	A
WATER DISTRIBUTION - Water storage tank, no foundation, water distribution	IHS Regular	1000000	Gal.	A
WATER DISTRIBUTION - Foundation - thermosyphen gravel pad, water distribution	IHS Regular	12500	Sf.	A

SEWER COLLECTION - Force mains, above ground, sewer collection	IHS Regular	11750	Ft.	A
SEWER COLLECTION - Lift station, sewer collection	IHS Regular	1	Ea.	A
SEWER COLLECTION - Vacuum station, no foundation, sewer collection	IHS Regular	750	Sf.	A
SEWER TREATMENT - Lagoon, borrow local material, sewer treatment	IHS Regular	5	Ac.	A
WATER SOURCE - Surface water impoundment, water source	IHS Regular	1	Ea.	A

Health Impact Tier: A - First Service
 B - Regulatory Compliance
 C - Essential Upgrades
 D - Beneficial Upgrades
 E - Desired Upgrades

Total Costs: \$20,856,286.00

DISCLAIMER: Data displayed below is for informational purposes only.**EXISTING DEFICIENCIES:**

- Water:** The existing water system is a central watering point and washeteria only. Water delivery is self-haul. The homes are in need of interior plumbing for minimal water facilities but there is no community system available. The washeteria uses a single well water source. The well yield is not sufficient to support normal water use for a community with a piped water system. The water treatment facilities are not capable of providing treated water in the quantity required to meet the demand of a piped water system.
- Sewer:** Individual homes dispose of honey buckets at a dump station on a self-haul basis and the Atmautluak Traditional Council operates small vehicle haul trailers to empty the dump stations in the lagoon. The washeteria waste water flows by gravity in above ground piping to a lift station and is pumped to the lagoon in an above ground pressure main. The system uses electric heat tape as the only freeze protection. Electric supply interruptions have resulted in pipe freezing and the repairs to the heat tape and pipe insulation have further exacerbated the problems with splices of questionable quality. Over current situations on the heat tape resulted in frequent circuit protection breakers tripping and that has resulted in more pipe freezing situations as the heat tape lay dormant until the circuit breaker was reset. Each episode of pipe freezing has resulted in more splices in the heat tape and pipe. At some point in the life of the system someone wedged a screw driver into heat tape circuit control to prevent it from tripping and there was an electrical fire in the pipe and control panel box. The system is now 20 years old and years of deferred maintenance have resulted in a system that is no longer maintainable from an economic stand point. In the existing condition raw sewage is being discharged to the surface at numerous locations along the pipeline. The unregulated discharge of sewage to the tundra is a regulatory violation of Alaska State and Federal statutes. A notice of violation will be issued June 2014 and attached. During the frequent time periods when the sewer main is frozen the washeteria is closed leaving the community without a source of treated drinking water for the community. The school depends on the washeteria for water and the school is forced to close when the washeteria is out of operation. The homes are in need of interior plumbing for minimal wastewater facilities but there is no community system available.
- Solid Waste:** Solid waste is disposed of in a tundra pond 1.5 miles up river This is an open dump There are ground water contamination problems There has never been adequate equipment provided to operate a land fill This dump site does not meet regulatory requirements.

O & M: None

PROPOSED FACILITIES:

- Water:** None
- Sewer:** This project would design and construct 3750 feet of above ground pressure main from the existing lift station to the existing lagoon.
- Solid Waste:** None

O & M: None

COST ESTIMATE

Scope Item	Funding Source	Quantity	Units	Health Impact Tier
SEWER COLLECTION - Force mains, above ground, sewer collection	IHS Regular	3600	Ft.	C
Sewer, Other - Professional Services (engineering)	IHS Regular	1	Ls.	C
SEWER COLLECTION - Utilidors, above ground, sewer collection	IHS Regular	3600	Ft.	C

Health Impact Tier: A - First Service
 B - Regulatory Compliance
 C - Essential Upgrades
 D - Beneficial Upgrades
 E - Desired Upgrades

Total Costs: \$2,100,274.00

DISCLAIMER: Data displayed below is for informational purposes only.**EXISTING DEFICIENCIES:**

- Water:** The existing water system is a central watering point and washeteria only. Water delivery is self-haul. The homes are in need of interior plumbing for minimal water facilities but there is no community system available. The washeteria uses a single well water source. The well yield is not sufficient to support normal water use for a community with a piped water system. The water treatment facilities are not capable of providing treated water in the quantity required to meet the demand of a piped water system.
- Sewer:** Individual homes dispose of honey buckets at a dump station on a self haul basis and the Atmautluak Traditional Council operates small vehicle haul trailers to empty the dump stations in the lagoon. The homes are in need of interior plumbing for minimal wastewater facilities but there is no community system available. The washeteria waste water flows by gravity in above ground piping to a lift station and is pumped to the lagoon in an above ground pressure main. System failures are common due to freezing.
- Solid Waste:** Solid waste is disposed of in a tundra pond 1.5 miles up river This is an open dump There are ground water contamination problems There has never been adequate equipment provided to operate a land fill This dump site does not meet regulatory requirements.
- O & M:** None

PROPOSED FACILITIES:

- Water:** None
- Sewer:** The sewage lagoon berms have settled into the tundra to the point where there is little protection from coastal flooding and the storage capacity is significantly reduced from that of the original design. This project will rebuild the lagoon to meet current DEC guidelines.
- Solid Waste:** None
- O & M:** None

COST ESTIMATE

Scope Item	Funding Source	Quantity	Units	Health Impact Tier
SEWER TREATMENT - Lagoon, borrow local material, sewer treatment	IHS Regular	12	Ac.	C
Sewer, Other - Professional Services (engineering)	IHS Regular	1	Ls.	D

Health Impact Tier:

- A - First Service
- B - Regulatory Compliance
- C - Essential Upgrades
- D - Beneficial Upgrades
- E - Desired Upgrades

Total Costs: \$3,547,570.00

DISCLAIMER: Data displayed below is for informational purposes only.**Updates Completed By Engineer****EXISTING DEFICIENCIES:**

Water: Washeteria not energy efficient. Community also seeking AEA funding for a biomass project.

Sewer: Washeteria not energy efficient. Community also seeking AEA funding for a biomass project.

Solid Waste: None

O & M: None

PROPOSED FACILITIES:

Water: Energy from biomass

Sewer: Energy from biomass

Solid Waste: None

O & M: None

CIP Details:**Related Projects:****Ongoing Funding:****COST ESTIMATE**

Scope Item	Funding Source	Quantity	Units	Health Impact Tier
Sewer, Other - Washeteria, sewer portion, no foundation, sewer other	IHS Regular	1	Sf.	D
Water, Other - Washeteria, water portion, no foundation, water other	IHS Regular	1	Sf.	D

Health Impact Tier: A - First Service
 B - Regulatory Compliance
 C - Essential Upgrades
 D - Beneficial Upgrades
 E - Desired Upgrades

Total Costs: \$300,000.00

DISCLAIMER: Data displayed below is for informational purposes only.**Updates Completed By Engineer****EXISTING DEFICIENCIES:****Water:** None

Sewer: The Bethel Sewage lagoon receives truck hauled sewage. The truck turnaround area and dumping area needs to be replaced to prevent a complete failure. This is an unusual situation where the truck dumping area will fail within 4 years and truck hauled sewer service would not be available. 75% of the community has truck hauled sewer service.

Solid Waste: None**O & M:** None**PROPOSED FACILITIES:****Water:** None**Sewer:** Adequate dumping area for truck hauled sewage.**Solid Waste:** None**O & M:** None**CIP Details:****Related Projects:**

Ongoing Funding: 1. The City of Bethel was awarded \$7,000,000 to complete the Institutional Corridor water project. The project involves updating the institutional corridor feasibility study, drilling a water well at the City Subdivision Water Treatment and connecting it to the water treatment facility, running 8" water pipe from the City Subdivision Water Treatment Plant to the Chief Eddie Hoffman Highway and connecting to two institutional users, which will service seven buildings/users. 2. The City of Bethel is using its personnel, heavy equipment, sand, and other materials to construct higher earthen berms at the City's 17-acre landfill. The City expects to complete at least 600 lineal feet of earthen berm at least ten feet high during summer 2014.

COST ESTIMATE

Scope Item	Funding Source	Quantity Units		Health Impact
				Tier
SEWER TREATMENT - Lagoon, borrow local material, sewer treatment	IHS Regular	1	Ac.	D
SEWER TREATMENT - Lagoon, borrow local material, sewer treatment	Other	1	Ac.	D

Health Impact Tier: A - First Service
 B - Regulatory Compliance
 C - Essential Upgrades
 D - Beneficial Upgrades
 E - Desired Upgrades

Total Costs: \$1,543,812.00

DISCLAIMER: Data displayed below is for informational purposes only.**Updates Completed By Engineer****EXISTING DEFICIENCIES:****Water:** None**Sewer:** The lagoon does not provide adequate treatment and consistently does not meet water quality standards. The regulatory agency, ADEC, has provided a letter explaining that the lagoon is out of compliance and it is not even possible to issue a permit for this facility.**Solid Waste:** None**O & M:** None**PROPOSED FACILITIES:****Water:** None**Sewer:** Dredging the lagoon is the first step toward correcting the problem. An addition cell is also needed to be able to permit this lagoon. -15 pts exceeds \$4M cap.**Solid Waste:** None**O & M:** None**CIP Details:****Related Projects:****Ongoing Funding:** 1. The City of Bethel was awarded \$7,000,000 to complete the Institutional Corridor water project. The project involves updating the institutional corridor feasibility study, drilling a water well at the City Subdivision Water Treatment and connecting it to the water treatment facility, running 8" water pipe from the City Subdivision Water Treatment Plant to the Chief Eddie Hoffman Highway and connecting to two institutional users, which will service seven buildings/users. 2. The City of Bethel is using its personnel, heavy equipment, sand, and other materials to construct higher earthen berms at the City's 17-acre landfill. The City expects to complete at least 600 lineal feet of earthen berm at least ten feet high during summer 2014.**COST ESTIMATE**

Scope Item	Funding Source	Quantity	Units	Health Impact Tier
SEWER TREATMENT - Lagoon, borrow local material, sewer treatment	IHS Regular	33	Ac.	D
Health Impact Tier: A - First Service B - Regulatory Compliance C - Essential Upgrades D - Beneficial Upgrades E - Desired Upgrades				

Total Costs: \$4,050,948.00

DISCLAIMER: Data displayed below is for informational purposes only.
Updates Completed By Engineer

EXISTING DEFICIENCIES:

Water: None

Sewer: The Bethel Lagoon is not in compliance with wastewater treatment standards. ADEC has provided a letter explaining that it is not even possible to issue a permit for this lagoon in the current condition.

Solid Waste: None

O & M: None

PROPOSED FACILITIES:

Water: None

Sewer: After dredging and adding a cell, the lagoon would meet all regulatory requirements and be able to be permitted. This will correct the regulatory issue. -15 pts exceeds \$4M cap.

Solid Waste: None

O & M: None

CIP Details:

Related Projects:

Ongoing Funding: 1. The City of Bethel was awarded \$7,000,000 to complete the Institutional Corridor water project. The project involves updating the institutional corridor feasibility study, drilling a water well at the City Subdivision Water Treatment and connecting it to the water treatment facility, running 8" water pipe from the City Subdivision Water Treatment Plant to the Chief Eddie Hoffman Highway and connecting to two institutional users, which will service seven buildings/users. 2. The City of Bethel is using its personnel, heavy equipment, sand, and other materials to construct higher earthen berms at the City's 17-acre landfill. The City expects to complete at least 600 lineal feet of earthen berm at least ten feet high during summer 2014.

COST ESTIMATE

Scope Item	Funding Source	Quantity	Units	Health Impact Tier
SEWER TREATMENT - Lagoon, borrow local material, sewer treatment	IHS Regular	33	Ac.	C
SEWER TREATMENT - Lagoon, borrow local material, sewer treatment	IHS Regular	33	Ac.	C

Health Impact Tier:

- A - First Service
- B - Regulatory Compliance
- C - Essential Upgrades
- D - Beneficial Upgrades
- E - Desired Upgrades

Total Costs: \$1,543,812.00

DISCLAIMER: Data displayed below is for informational purposes only.**EXISTING DEFICIENCIES:**

- Water:** The City of Brevig Mission operates community wide piped sanitation facilities that were completed in 2007. The 7 occupied homes and buildings along the beach are not served by the community system. These homes and buildings operate on a self haul water system.
- Sewer:** The City of Brevig Mission operates community wide piped sanitation facilities that were completed in 2007. The 7 occupied homes and buildings along the beach are not served by the community system. These homes and buildings operate self haul honey buckets and dispose of them at a dump station near a lift station.
- Solid Waste:** None
- O & M:** None

PROPOSED FACILITIES:

- Water:** Extend the 6" water main 815 ft and connect the existing homes and occupied buildings. Install interior plumbing to the existing homes along the beach. Install new and adjust 5 fire hydrants.
- Sewer:** Extend the sewer main 780 ft and connect the existing homes and occupied buildings along the beach to a gravity sewer system. Install interior plumbing to the existing homes along the beach.
- Solid Waste:** None
- O & M:** None

COST ESTIMATE

Scope Item	Funding Source	Quantity	Units	Health Impact Tier
SEWER COLLECTION - In-house plumbing, gravity, sewer collection	IHS Regular	7	Ea.	A
SEWER COLLECTION - Mains, direct bury, sewer collection	IHS Regular	780	Ft.	A
SEWER COLLECTION - Service lines, direct bury, sewer collection	IHS Regular	525	Ft.	A
Sewer, Other - Professional Services (engineering)	IHS Regular	1	Ls.	A
WATER DISTRIBUTION - In-house plumbing, water distribution	IHS Regular	7	Ea.	A
WATER DISTRIBUTION - Mains, direct bury, water distribution	IHS Regular	1630	Ft.	A
WATER DISTRIBUTION - Service lines, direct bury, water distribution	IHS Regular	210	Ft.	A
Water, Other - Professional Services (engineering)	IHS Regular	1	Ls.	A

Health Impact Tier: A - First Service
 B - Regulatory Compliance
 C - Essential Upgrades
 D - Beneficial Upgrades
 E - Desired Upgrades

Total Costs: \$1,277,625.00

DISCLAIMER: Data displayed below is for informational purposes only.**EXISTING DEFICIENCIES:**

- Water:** Brevig Mission's capacity to store water will not meet the needs of the projected growth of the community
- Sewer:** Brevig Mission's capacity to treat wastewater will not meet the needs of the projected growth of the community and the projected life of the existing Community Drain Field is estimated to be 15 yrs from date of first use (2003)
- Solid Waste:** None
- O & M:** None

PROPOSED FACILITIES:

- Water:** The City of Brevig Mission operates community wide piped sanitation facilities that were completed in 2007. The Sanitation Facilities Master Plan completed in October 2010 recommends construction of an additional 100,000 gal water storage tank
- Sewer:** The City of Brevig Mission operates community wide piped sanitation facilities that were completed in 2007. The Sanitation Facilities Master Plan completed in October 2010 recommends construction of an additional community drain field and replacing the lift station pump with a grinder type pump
- Solid Waste:** None
- O & M:** None

COST ESTIMATE

Scope Item	Funding Source	Quantity	Units	Health Impact Tier
SEWER COLLECTION - Lift station, sewer collection	IHS Regular	1	Ea.	D
SEWER TREATMENT - Drainfield, community, sewer treatment	IHS Regular	22500	Sf.	D
WATER DISTRIBUTION - Water storage tank, no foundation, water distribution	IHS Regular	100000	Gal.	D
Sewer, Other - Professional Services (engineering)	IHS Regular	1	Ls.	D
Water, Other - Professional Services (engineering)	IHS Regular	1	Ls.	D
WATER TREATMENT - Foundation - thermosyphen gravel pad, water treatment	IHS Regular	3000	Sf.	D

Health Impact Tier:

- A - First Service
- B - Regulatory Compliance
- C - Essential Upgrades
- D - Beneficial Upgrades
- E - Desired Upgrades

Total Costs: \$1,242,745.00

DISCLAIMER: Data displayed below is for informational purposes only.**Updates Completed By Engineer****EXISTING DEFICIENCIES:**

Water: The 183,000 gallon tank is 26 years old. The foundation was made from untreated wood and is failing. If the tank foundation is not replaced, the tank is expected to fail in 4 years. There is also corrosion that needs to be addressed to extend the life of the tank.

Sewer: None

Solid Waste: None

O & M: None

PROPOSED FACILITIES:

Water: After the foundation is replaced the tank is expected to last for 20 years.

Sewer: None

Solid Waste: None

O & M: None

CIP Details:

Related Projects: The city has a wind to heat project to provide heat to the water tank. It is a good time to correct the problems with the treated water tank.

Ongoing Funding: VSW/EPA and VSW/Rd are funding water and sewer construction in Buckland

COST ESTIMATE

Scope Item	Funding Source	Quantity	Units	Health Impact Tier
WATER TREATMENT - Foundation - conventional, local gravel, water treatment	IHS Regular	183000	Sf.	D

Health Impact Tier: A - First Service
B - Regulatory Compliance
C - Essential Upgrades
D - Beneficial Upgrades
E - Desired Upgrades

Total Costs: \$457,500.00

DISCLAIMER: Data displayed below is for informational purposes only.**EXISTING DEFICIENCIES:****Water:** None**Sewer:** None**Solid Waste:** Fenced, open site located in 1993 with VSW, SWMP developed. Needs improvement.**O & M:** Operator and management training and tools needed.**PROPOSED FACILITIES:****Water:** None**Sewer:** None**Solid Waste:** Upgrade utilized site to an approvable site, Redevelop SW management plan, no closure needed.**O & M:** Operator management training & tools**COST ESTIMATE**

Scope Item	Funding Source	Quantity	Units	Health Impact Tier
Solid Waste C (Development) - Development, solid waste site	IHS Regular	3	Ac.	D
Solid Waste A (Plan) - Management Plan, Solid Waste	IHS Regular	1	Ls.	D

Health Impact Tier:

- A - First Service
- B - Regulatory Compliance
- C - Essential Upgrades
- D - Beneficial Upgrades
- E - Desired Upgrades

Total Costs: \$1,305,000.00